

VIA FIRST CLASS MAIL

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FULBRIGHT & JAWORSKI L.L.P.

By



LUD 5615 (09905230)

GP 1642
Box seq WD
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : JAGER, et al.
Serial No. : 09/451,739
Filed : November 30, 1999
For : ISOLATED NUCLEIC ACID MOLECULES ENCODING
CANCER ASSOCIATED ANTIGENS, THE ANTIGENS
PER SE, AND USES THEREOF
Group Art Unit : 1642
Examiner : G. Nickol

TECH CENTER 1600/2900

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December 8, 2000

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

**LETTER RE
SEQUENCES**

Responsive to the office action of December 1, 2000, a copy of which is attached, please replace the paper copy of sequence information in this case and the computer readable form thereof with the attached. The undersigned hereby declares that, to the best of his knowledge, the information on the submitted paper copy is identical to the information in the computer readable form of sequence information, and both are identical to information presented in the application as filed. No new matter is believed to be presented.

Respectfully submitted,

FULBRIGHT & JAWORSKI L.L.P.

By

Norman D. Hanson
Reg. No. 30,946

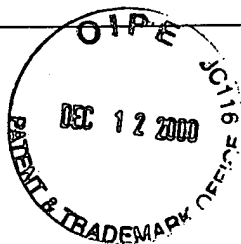
666 Fifth Avenue
New York, New York 10103
(212) 318-3000

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Scanlan, Matthew
Gure, Ali
Jager, Elke
Knuth, Alexander
Old, Lloyd
Chen, Yao-tseng



<120> Isolated Nucleic Acid Molecules Encoding Cancer Associated Antigens,
the Antigens per se, and Uses Thereof

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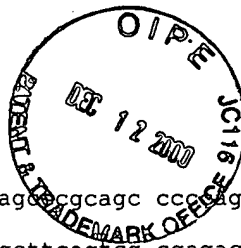
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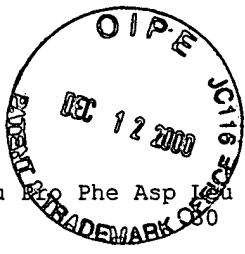
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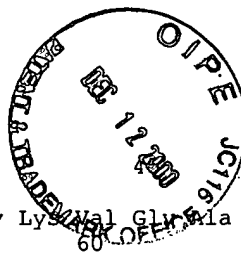
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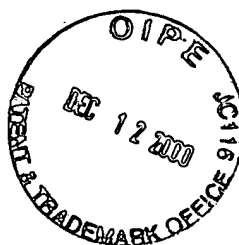
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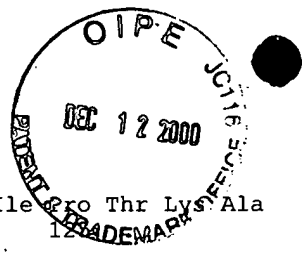
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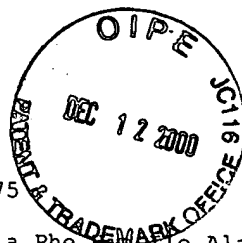
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325 330 335
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Leu His Glu Asn Cys Met Leu Lys Lys Glu Ile Ala Met Leu Lys Leu
370 375 380 385
Glu Ile Ala Thr Leu Lys His Gln Tyr Gln Glu Lys Glu Asn Lys Tyr
390 395 400
Phe Glu Asp Ile Lys Ile Leu Lys Glu Lys Asn Ala Glu Leu Gln Met
405 410 415
Thr Leu Lys Leu Lys Glu Glu Ser Leu Thr Lys Arg Ala Ser Gln Tyr
420 425 430
Ser Gly Gln Leu Lys Val Leu Ile Ala Glu Asn Thr Met Leu Thr Ser
435 440 445
Lys Leu Lys Glu Lys Gln Asp Lys Glu Ile Leu Glu Ala Glu Ile Glu
450 455 460 465
Ser His His Pro Arg Leu Ala Ser Ala Val Gln Asp His Asp Gln Ile

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470

475

480

Val Thr Ser Arg Lys Ser Gln Glu Pro Ala Phe His Ile Ala Gly Asp
485 490 495

Ala Cys Leu Gln Arg Lys Met Asn Val Asp Val Ser Ser Thr Asp Ile
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<211> 33

<212> DNA

<213> Homo sapiens

<400> 17

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<210> 18

<211> 34

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<213> Homo sapiens

<400> 18

cacacaaagc ttctaggatt tggcacagcc agag 34

<210> 19

<211> 294

<212> PRT

<213> Homo sapiens

<400> 19

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1 5 10 15

Asp Pro Gly Pro Val Ala Arg Gly Arg Gly Cys Ser Ser Asp Arg Leu
20 25 30

Pro Arg Pro Ala Gly Pro Ala Arg Arg Gln Phe Gln Ala Ala Ser Leu
35 40 45

Leu Thr Arg Gly Trp Gly Arg Ala Trp Pro Trp Lys Gln Ile Leu Lys
50 55 60

Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg Glu Thr Asp Gly Ala
65 70 75 80

Gln Lys Arg Arg Met Leu His Cys Val Gln Arg Ala Leu Ile Arg Ser
85 90 95

Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val Ser Gln Met Val Glu
100 105 110

Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser His Val Glu Leu Phe
115 120 125

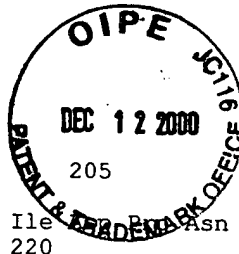
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Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys Pro
145 150 155 160

Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu Asn
165 170 175

Ala Ser Ser Asn His Asp His Asp Asp Gly Ala Ser Gly Thr Pro Lys
180 185 190

Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Lys Arg Ser Lys Ala Lys



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C
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195 200
Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro Ile Asn Glu
210 215 220
Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile Gly
225 230 235 240
Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys Val
245 250 255
Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys Arg
260 265 270
Gly Glu Asn Glu Lys Thr Met Asp Lys Ala Leu Glu Lys Ser Lys Lys
275 280 285
Glu Arg Ala Tyr Asn Arg
290 294



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Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

09/451.735 11/30/99

JAGER

LUD-5615

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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024972 HM12/1201
FULBRIGHT & JAWORSKI, LLP
655 FIFTH AVE
NEW YORK NY 10103-0198

NICKOL, G

EXAMINER

1642

ART UNIT

PAPER NUMBER

9

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

FULBRIGHT & JAWORSKI, LLP
NEW YORK DOCKETING

Docketed ☒ Not Required ☐

Previously ☐ Updated ☐

Docket No: LUD 5615-102

Action: Sequence listing

Reminder: 12-25-2000

Date: Due/Done 1-1-2001

Initials: [Signature]



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/451739			

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EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED:

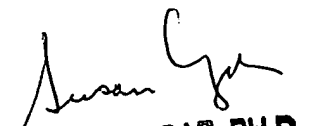
Please find below a communication from the EXAMINER in charge of this application

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Any inquiry concerning this communication should be directed to Examiner **Gary Nickol, Ph.D.**, Art Unit 1642, whose telephone number is **703-305-7143**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0196.

APPLICANT IS GIVEN A ONE MONTH EXTENDABLE PERIOD WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136. In no case may an applicant extend the period for response beyond the six month statutory period. Applicant is requested to return a copy of the attached Notice to Comply with the response.


SUSAN LINBAR, PH.D
PRIMARY EXAMINER



Application No. 09/451739

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: _____

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Applicant Must Provide:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

PatentIn Software Program Support

Technical Assistance.....703-287-0200

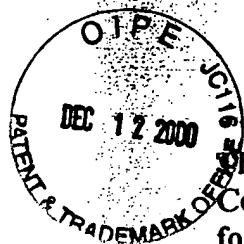
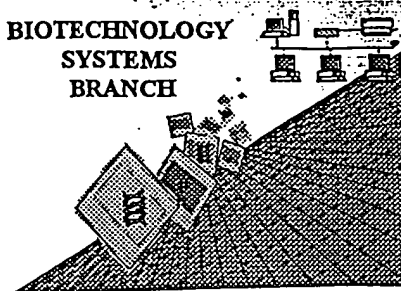
To Purchase PatentIn Software.....703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY

Nichols

RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

09/451,739A

Source:

1642

Date Processed by STIC:

2/12/2000

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THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY
EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR FURTHER INFORMATION, PLEASE TELEPHONE MARK SPENCER,
703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

1642



RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/451,739A

DATE: 07/12/2000
TIME: 15:56:26

Input Set : A:\lud-5615.txt
Output Set: N:\CRF3\07122000\I451739A.raw

1 <110> APPLICANT: Jager, Dirk
2 Scanlan, Matthew
3 Gure, Ali
4 Jager, Elke
5 Knuth, Alexander
6 Old, Lloyd
7 Chen, Yao-tseng
9 <120> TITLE OF INVENTION: Isolated Nucleic Acid Molecules Encoding Cancer Associated Antigens,
10 the Antigens per se, and Uses Thereof
12 <130> FILE REFERENCE: LUD 5615
14 <140> CURRENT APPLICATION NUMBER: 09/451,739A
16 <141> CURRENT FILING DATE: 1999-11-30
18 <160> NUMBER OF SEQ ID NOS: 19

Does Not Comply
Corrected Diskette Needed

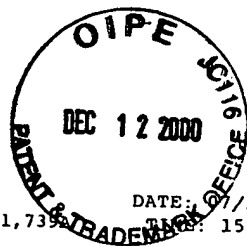
ERRORED SEQUENCES

527 <210> SEQ ID NO: 16
528 <211> LENGTH: 528
529 <212> TYPE: PRT
530 <213> ORGANISM: Homo sapiens
531 <220> FEATURE:
532 <400> SEQUENCE: 16
533 Met Lys Val Ser Ile Pro Thr Lys Ala Leu Glu Leu Met Asp Met Gln
534 1 5 10 15
536 Thr Phe Lys Ala Glu Pro Pro Glu Lys Pro Ser Ala Phe Glu Pro Ala
537 20 25 30
539 Ile Glu Met Gln Lys Ser Val Pro Asn Lys Ala Leu Glu Leu Lys Asn
540 35 40 45
542 Glu Gln Thr Leu Arg Ala Asp Glu Ile Leu Pro Ser Glu Ser Lys Gln
543 50 55 60
545 Lys Asp Tyr Glu Glu Ser Ser Trp Asp Ser Glu Ser Leu Cys Glu Thr
546 65 70 75 80
548 Val Ser Gln Lys Asp Val Cys Leu Pro Lys Ala Thr His Gln Lys Glu
549 85 90 95
551 Ile Asp Lys Ile Asn Gly Lys Leu Glu Glu Ser Pro Asp Asn Asp Gly
552 100 105 110
554 Phe Leu Lys Ala Pro Cys Arg Met Lys Val Ser Ile Pro Thr Lys Ala
555 115 120 125
557 Leu Glu Leu Met Asp Met Gln Thr Phe Lys Ala Glu Pro Pro Glu Lys
558 130 135 140
560 Pro Ser Ala Phe Glu Pro Ala Ile Glu Met Gln Lys Ser Val Pro Asn
561 145 150 155 160
563 Lys Ala Leu Glu Leu Lys Asn Glu Gln Thr Leu Arg Ala Asp Gln Met
564 165 170 175
566 Phe Pro Ser Glu Ser Lys Gln Lys Lys Val Glu Glu Asn Ser Trp Asp
567 180 185 190

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PATENT APPLICATION: US/09/451,739A DATE: 7/12/2000 TIME: 15:56:26

Input Set : A:\lud-5615.txt

Output Set: N:\CRF3\07122000\I451739A.raw

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569 Ser Glu Ser Leu Arg Glu Thr Val Ser Gln Lys Asp Val Cys Val Pro
 570 195 200 205
 572 Lys Ala Thr His Gln Lys Glu Met Asp Lys Ile Ser Gly Lys Leu Glu
 573 210 215 220
 575 Asp Ser Thr Ser Leu Ser Lys Ile Leu Asp Thr Val His Ser Cys Glu
 576 225 230 235 240
 578 Arg Ala Arg Glu Leu Gln Lys Asp His Cys Glu Gln Arg Thr Gly Lys
 E--> 579 260 245 265 250 270 255
 581 Met Glu Gln Met Lys Lys Lys Phe Cys Val Leu Lys Lys Lys Leu Ser
 E--> 582 275 260 280 265 285 270
 584 Glu Ala Lys Glu Ile Lys Ser Gln Leu Glu Asn Gln Lys Val Lys Trp
 E--> 585 290 275 295 280 300 285
 587 Glu Gln Glu Leu Cys Ser Val Arg Leu Thr Leu Asn Gln Glu Glu Glu
 E--> 588 305 310 315 320
 590 Lys Arg Arg Asn Ala Asp Ile Leu Asn Glu Lys Ile Arg Glu Glu Leu
 E--> 591 325 330 335
 593 Gly Arg Ile Glu Glu Gln His Arg Lys Glu Leu Glu Val Lys Gln Gln
 E--> 594 340 345 350
 596 Leu Glu Gln Ala Leu Arg Ile Gln Asp Ile Glu Leu Lys Ser Val Glu
 E--> 597 355 360 365
 599 Ser Asn Leu Asn Gln Val Ser His Thr His Glu Asn Glu Asn Tyr Leu
 E--> 600 370 375 380
 602 Leu His Glu Asn Cys Met Leu Lys Lys Glu Ile Ala Met Leu Lys Leu
 E--> 603 385 390 395 400
 605 Glu Ile Ala Thr Leu Lys His Gln Tyr Gln Glu Lys Glu Asn Lys Tyr
 E--> 606 405 410 415
 608 Phe Glu Asp Ile Lys Ile Leu Lys Glu Lys Asn Ala Glu Leu Gln Met
 E--> 609 420 425 430
 611 Thr Leu Lys Leu Lys Glu Glu Ser Leu Thr Lys Arg Ala Ser Gln Tyr
 E--> 612 435 440 445
 614 Ser Gly Gln Leu Lys Val Leu Ile Ala Glu Asn Thr Met Leu Thr Ser
 E--> 615 450 455 460
 617 Lys Leu Lys Glu Lys Gln Asp Lys Glu Ile Leu Glu Ala Glu Ile Glu
 E--> 618 465 470 475 480
 620 Ser His His Pro Arg Leu Ala Ser Ala Val Gln Asp His Asp Gln Ile
 E--> 621 485 490 495
 623 Val Thr Ser Arg Lys Ser Gln Glu Pro Ala Phe His Ile Ala Gly Asp
 E--> 624 500 505 510
 626 Ala Cys Leu Gln Arg Lys Met Asn Val Asp Val Ser Ser Thr Asp Ile
 E--> 627 515 520 525

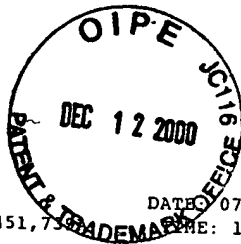
numbers JJ

↓

FSI

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.



VERIFICATION SUMMARY

PATENT APPLICATION: US/09/451,739 DATE: 07/12/2000 TIME: 15:56:27

Input Set : A:\lud-5615.txt

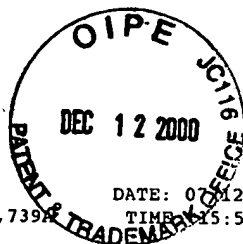
Output Set: N:\CRF3\07122000\I451739A.raw

L:25 M:283 W: Missing Blank Line separator, <220> field identifier
 L:28 M:283 W: Missing Blank Line separator, <400> field identifier
 L:35 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:1
 L:35 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:1
 L:86 M:283 W: Missing Blank Line separator, <220> field identifier
 L:87 M:283 W: Missing Blank Line separator, <400> field identifier
 L:133 M:283 W: Missing Blank Line separator, <220> field identifier
 L:134 M:283 W: Missing Blank Line separator, <400> field identifier
 L:166 M:283 W: Missing Blank Line separator, <220> field identifier
 L:167 M:283 W: Missing Blank Line separator, <400> field identifier
 L:203 M:283 W: Missing Blank Line separator, <220> field identifier
 L:204 M:283 W: Missing Blank Line separator, <400> field identifier
 L:264 M:283 W: Missing Blank Line separator, <220> field identifier
 L:265 M:283 W: Missing Blank Line separator, <400> field identifier
 L:313 M:283 W: Missing Blank Line separator, <220> field identifier
 L:314 M:283 W: Missing Blank Line separator, <400> field identifier
 L:365 M:283 W: Missing Blank Line separator, <220> field identifier
 L:368 M:283 W: Missing Blank Line separator, <400> field identifier
 L:391 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:8
 L:391 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:8
 L:400 M:283 W: Missing Blank Line separator, <220> field identifier
 L:401 M:283 W: Missing Blank Line separator, <400> field identifier
 L:409 M:283 W: Missing Blank Line separator, <220> field identifier
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 L:418 M:283 W: Missing Blank Line separator, <220> field identifier
 L:419 M:283 W: Missing Blank Line separator, <400> field identifier
 L:427 M:283 W: Missing Blank Line separator, <220> field identifier
 L:428 M:283 W: Missing Blank Line separator, <400> field identifier
 L:436 M:283 W: Missing Blank Line separator, <220> field identifier
 L:437 M:283 W: Missing Blank Line separator, <400> field identifier
 L:445 M:283 W: Missing Blank Line separator, <220> field identifier
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 L:516 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:15
 L:520 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:15
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 L:522 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:15
 L:522 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:15
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 L:531 M:283 W: Missing Blank Line separator, <220> field identifier
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 L:579 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
 L:582 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16

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PATENT APPLICATION: US/09/451,739A

DATE: 07/12/2000

TIME: 15:56:27

Input Set : A:\lud-5615.txt

Output Set: N:\CRF3\07122000\I451739A.raw

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L:588 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:591 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:594 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:597 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:600 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:603 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
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L:609 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
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L:618 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:621 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:624 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:627 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:627 M:252 E: No. of Seq. differs, <211>LENGTH:Input:528 Found:512 SEQ:16
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L:635 M:283 W: Missing Blank Line separator, <400> field identifier
L:643 M:283 W: Missing Blank Line separator, <220> field identifier
L:644 M:283 W: Missing Blank Line separator, <400> field identifier
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